

IN THE CLAIMS:

The pending claims, as amended, at issue are presented below.

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1. (Amended) An electrical apparatus, comprising:
at least one blade on an end of an interconnection element, said blade having a given length and oriented on the interconnection element such that said length runs substantially parallel to a horizontal wiping motion of said blade relative to an electrical terminal when the interconnection element is placed in wiping contact with the electrical terminal.

2. The electrical apparatus of claim 1 wherein the horizontal motion of said blade occurs when said blade makes an electrical contact with the electrical terminal.

3. The electrical apparatus of claim 2 wherein said blade has a truncated pyramid cross-sectional structure.

4. The electrical apparatus of claim 2 wherein said blade has a sharpened edge along said length of said blade.

5. The electrical apparatus of claim 4 wherein said blade has a cross-sectional structure with a front edge at a first end of said length of said blade and a back edge at a second end of said length of said blade.

6. The electrical apparatus of claim 5 wherein said front and back edges are rectilinear.

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7. The electrical apparatus of claim 5 wherein said front and back edges are pyramidal.

8. The electrical apparatus of claim 5 wherein said front and back edges have two sides such that said blade has a hexagonal shape.

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9. (Amended) A tip structure, comprising:
a foot having an upper and a lower surface; and,
at least one blade on said upper surface of said foot, said blade having a given length and oriented on said foot such that said length runs substantially parallel to a horizontal wiping motion of said foot.

10. The tip structure of claim 9 wherein the horizontal motion of said foot occurs when said tip structure makes an electrical contact with an electrical terminal.

11. The tip structure of claim 9 further comprising a resilient contact element coupled to said lower surface of said foot.

12. The tip structure of claim 9 wherein said blade has a sharpened edge along said length of said blade.

13. The tip structure of claim 12 wherein said blade has a primary edge at a front end of said blade and a trailing edge at a back end of said blade.

14. The tip structure of claim 12 having a first and a second blade on said upper surface of said foot.

15. The tip structure of claim 14 wherein said first and second blades are joined by a bridge.

16. The tip structure of claim 14 wherein said first and second blades are in a juxtaposed position.

17. The tip structure of claim 12 wherein said blade has a triangular cross-sectional structure with a front edge at a first end of said length of said blade and a back edge at a second end of said length of said blade.

18. The tip structure of claim 17 wherein said front and back edges are rectilinear.

19. The tip structure of claim 17 wherein said front and back edges are pyramidal.

20. The tip structure of claim 17 wherein said front and back edges have two sides such that said blade has a hexagonal shape.

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21. (Amended) A tip structure, comprising:
a foot having an upper and a lower surface; and,
at least one blade on said upper surface of said foot, said blade having a given length and oriented on said foot such that said length is within approximately $\pm 45^\circ$ of an axis parallel to a horizontal wiping motion of said foot.

22. The tip structure of claim 21 wherein said blade has a sharpened edge along said length of said blade.

23. The tip structure of claim 22 having a first and a second blade on said upper surface of said foot.
24. The tip structure of claim 23 wherein said first and second blades are joined by a bridge.
25. The tip structure of claim 23 wherein said first and second blades are in a juxtaposed position.
26. The tip structure of claim 22 wherein said blade has a triangular cross-sectional structure with a front edge at a first end of said length of said blade and a back edge at a second end of said length of said blade.
27. The tip structure of claim 26 wherein said front and back edges are rectilinear.
28. The tip structure of claim 26 wherein said front and back edges are pyramidal.
29. The tip structure of claim 26 wherein said front and back edges have two sides such that said blade has a hexagonal shape.

30. (Amended) An electrical contact structure comprising:
a plurality of interconnection elements disposed in relationship with one another;
a plurality of tip structures affixed to respective ones of said interconnection elements, each
of said tip structures further comprising:

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at least one blade on a contact point of a respective one of said interconnection elements,
said blade having a given length and oriented on the respective one of said interconnection
elements such that said length runs substantially parallel to a horizontal wiping motion of the
respective one of said interconnection elements when the respective one of said interconnection
elements deflects across a terminal of an electrical component to make an electrical contact.

31. (Amended) The electrical contact structure of claim 30 wherein the horizontal motion of
said blade occurs when said tip structure makes electrical contact with an electrical surface.

32. The electrical contact structure of claim 31 wherein said blade has a sharpened edge
along said length of said blade.

33. The electrical contact structure of claim 32 wherein said blade has a triangular cross-
sectional structure with a front edge at a first end of said length of said blade and a back edge at a
second end of said length of said blade.

34. The electrical contact structure of claim 33 wherein said front and back edges are
rectilinear.

35. The electrical contact structure of claim 33 wherein said front and back edges are pyramidal.

36. The electrical contact structure of claim 33 wherein said front and back edges have two sides such that said blade has a hexagonal shape.

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37 (Amended) A method of making an electrical contact structure, comprising the steps of:
forming a trench in a sacrificial substrate;
depositing at least one layer of at least one conductive material in said trench to form a blade having a given length, an upper surface, and a lower surface; and,
coupling an interconnection element to said lower surface of said blade, wherein said blade is oriented such that said length of said blade runs substantially parallel to a horizontal wiping motion of said blade.

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38. The method of claim 37 further comprising the step of releasing said blade from said sacrificial substrate.

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39. The method of claim 38 wherein said step of releasing said blade from said sacrificial substrate further comprises releasing said blade from said sacrificial substrate by a process selected from the group consisting of heat and chemical etching.

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40. The method of claim 37 wherein said step of forming a trench further comprises etching a trench in a substrate with a potassium hydroxide selective etch.

~~41~~ 41. The method of claim ~~40~~ 40 wherein said step of etching a trench further comprises etching a trench in a substrate with a potassium hydroxide etch between the 111 and 001 crystal orientation.

~~42~~ 42. The method of claim ~~37~~ 37 wherein said step of forming a trench further comprises forming a trench in a substrate, wherein said trench has a triangular cross-section.

~~43~~ 43. The method of claim ~~37~~ 37 wherein said step of forming a trench further comprises forming a trench in a substrate, wherein said trench has a truncated pyramid cross-section.

~~44~~ 44. The method of claim ~~37~~ 37 wherein said step of coupling said interconnection element to said lower surface of said blade further comprises soldering said interconnection element to said lower surface of said blade.

~~45~~ 45. The method of claim ~~37~~ 37 wherein said step of coupling said interconnection element to said lower surface of said blade further comprises brazing said interconnection element to said lower surface of said blade.